

AI in Manufacturing by Industry

Artificial Intelligence (AI) is rapidly transforming the global workforce, ushering in a new era of efficiency, innovation, and productivity. As manufacturers across various sectors increasingly integrate AI technologies, the nature of work is evolving, creating both opportunities and challenges. A recent McKinsey report identified several occupations as being positioned to see a greater share of automated work hours with the aid of AI.

Overall, **“accelerated adoption of artificial intelligence could result in the automation of about 30% of hours worked by Americans in 2030”** (Fox 5).

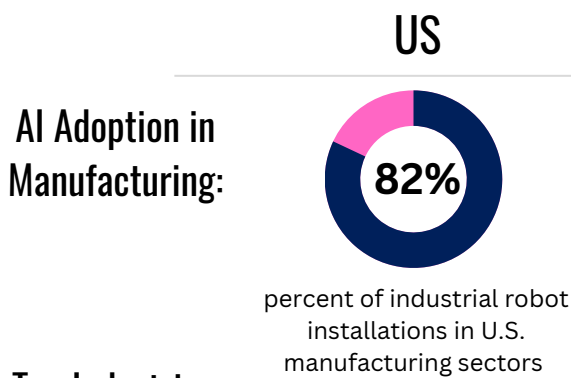
AI Automation: Impacting Georgia’s Manufacturing Sector

By 2030, more than 2 million manufacturing jobs in the U.S. are expected to remain unfilled due to a skills gap.

Job Transformation: AI is creating new roles that require advanced technical skills.

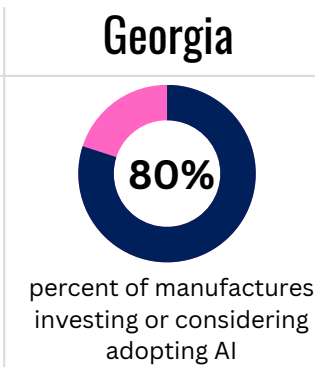
Labor Shortage: There are projected shortages of skilled workers.

Economic Impact: AI integration is making manufacturing more efficient and competitive.



Top Industries:

- Automotive
- Manufacturing
- Electronics
- Metal and Machinery
- Plastics and Chemicals
- Food and Beverage



- Semiconductors
- Batteries and Electrification
- Food Production
- Aerospace and Defense

Increases in Percentage of Automated Work Hours

- **STEM fields:** +16 points to 30%
- **Education and Workforce Training Professionals:** +16%
- **Agriculture and Production Work roles:** baselines of 27% and 30%, respectively
- **Creatives and Arts Management:** +15-points to about 25%
- **Business and Legal Professionals:** +14-points to 30%

Why it Matters:

AI can optimize production processes, reduce downtime, and increase throughput. Systems can detect defects and ensure higher quality standards. In the electronics industry, AI can identify minute flaws in components that might be missed by human inspectors and can help in predictive maintenance, reducing unexpected breakdowns and maintenance costs. This is particularly important in the metal and machinery sector, where equipment downtime can be very costly.

Providing Solutions:

TAG-Ed offers exclusive and cutting-edge technology workforce solutions, designed to help employers stand out in the AI integration race. Our top three solutions are:

- Provide monthly and quarterly industry-related artificial intelligence research regarding jobs, skills, and technology updates.
- Our upskilling and reskilling AI-Tech-related certificate programs are designed to equip your workforce with the latest AI skills, enhancing their productivity and your company's competitiveness.
- The Technology Association of Georgia's Membership, a trusted platform, provides opportunities to connect, promote, influence, and have access tech education.